

### Amendment to the Abstract

Please replace the Abstract with the following amended Abstract

A method ~~and an apparatus are provided~~ for reducing cache memory misses in a computer that performs context switches between at least a first context and a second context. A First logic identifies ~~at least a first prefetch region in a first memory element during compilation of a computer program by the computer~~ and a second logic identifies critical memory references within the first prefetch region during compilation of a computer program. The critical memory references within the first prefetch region correspond to data ~~that may be needed~~ in cache memory if a context switch occurs from a process or thread associated with the second context to a process or thread associated with the first context during program execution ~~by the computer~~. Third logic prefetches data associated with the identified critical memory references and stores the prefetched data in cache memory prior to a process or thread associated with the first context being resumed when a switch from the second context to the first context occurs during program execution.